L4LTV Interview with John Chippeindall 24th July 2013
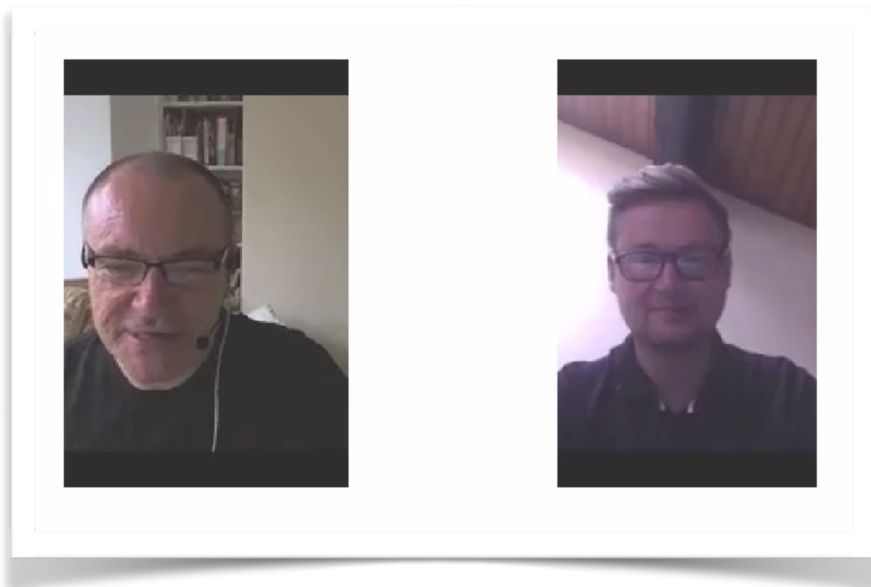

This is the first in a series of interviews I conducted over Skype and FaceTime in the latter half of 2013 for inclusion in the first season of the L4LTV CPD Web internet TV Channel. One part of the program regularly consists of an in-depth interview with a teacher/ practitioner in the world of ICT and Computing in Education. It was intended as an insight into the types of people who pro-actively developed resources for the new Computing Curriculum a whole year in advance of its implementation.

This was, in part, to showcase accessible and pertinent resources but also to show the path by which people come to teaching and their dedication and involvement in the spread of informal CPD using social media and teacher networks. It is both forward and backward facing in that as well as being an up-to-date pointer to various resources (at the time of writing) it also acts as an archive of activity receding rapidly into the past; as well as both of these it, I hope, helps document cultural change in the teaching community (no matter how small at present). What are the lessons to be learned that will endure? What things stretch out beyond the vagaries of fads and gadgets that appear to work (or not as the case may be) in hindsight?

Whatever the case in years to come it is my contention that until the vast majority of the teaching force starts to take charge of their own training and professional development, things will not change in UK education system.

As a filmmaker, A STEM ambassador, a teacher and someone who has interviewed hundreds of practitioners on a regular basis over the years, I see the enrichment that leads to amazing teaching and learning every day. Often this is localised and hidden from view, with a only a few select people being able to access resources and/or processes - this publication and all subsequent 12 interviews are an attempt to widen access for teachers and others and to both, point to, and augment, an online and offline community around this activity. I am indebted to Computing at School for providing a small grant to enable the transcription of these interviews for a wider audience and to enable subtitling on videos.

All videos are archived at archive.org search for the keyword L4LTV.

Leon Cych 27th December 2013

LC = Leon Cych   JC = Jon Chippendall

OK I'm with Jon Chippendall of Crumpsall Lane Primary school and the amazing thing, John, about you, is we've got a year to go in the Computer Science Curriculum and you are already a year ahead but before we talk about that; about the wonderful work you've done, perhaps you could give us a brief bio of how you got to come into teaching and some of your biography.

Jon Chippendall (JC):

Sure yeah. Well before teaching I was in engineering. I studied aerospace engineering at the University of Manchester. I did a degree in that and then after I did my degree I went on and did a Ph.D in the same subject.

LC:

Why doesn't that surprise me. (laughs)

JC:

It was thoroughly enjoyable doing a Ph.D Specifically I was looking at the flow and vectoring of supersonic jets there, it was fantastic fun. But in that time whilst I was doing my Ph.D I started working with the University of Manchester's widening participation team because there was a big drive, as there still is, to encourage students to study the STEM disciplines. (Science Technology Engineering and Maths).

We were particularly targeting schools where children didn't have a history of family going on to higher education and I started doing projects working in schools. around science, around physics and I thought: 'I really enjoy this. I'm really enjoying my time in schools'.

And towards the end of my Ph.D I decided that I wanted to pursue that. Not only because I enjoyed working with young children, young people, because also, when you do a Ph.D you learn as much about the process of learning as you do about the subject you are learning about.

I finished my Ph.D with a real interest in how I'd learned; how I'd gone about completing my Ph.D; loved working with young children so I decide to pursue a career in teaching which is why I found myself returning to Manchester on a primary PGCE Course.

LC:

As I said that doesn't surprise me. Now tell me about your cross-over skills, where you think (…it is the case…), between Computer Science and teaching your particular Ph.D subject and teaching where do you think those skills have come in handy? I know you've already talked about learning about the whole process but what do you think specifically you could target because I'm in this series of interviews, trying to look at people in different Venn Diagrams and where they meet and what is it that actually makes people go the extra mile.

JC:

OK - well I think there's kind of two sides to that. There is the kind of two sides to that there is the crossover between the skills and knowledge I have from the nature of the discipline that I did but also given at post graduate level you are very much self-directed you are actually learning a lot

about theories of education as well; about how you learn. I mean certainly I've found my first year in my Ph.D was very difficult and the reason for that is that I think there is the opportunity sometimes that at undergraduate level, depending on the mechanisms through which the degrees are assessed, (ours was very much exam based) and I think there is the opportunity because of that it kind of encourages and rewards rote learning slightly to get through the exams you sit. Now when I came to my Ph.D I realised that actually you needed a deep understanding of your subject which wasn't necessarily always evidenced in rote learning and high exam marks so I kind of went back to basics, really, with my subject and went to first principles, and kind of ensured that I really understood, the kid of the basics of the subject that I was studying. And through that experience I was aware of how there are these different kinds of ways we go about learning - some of them more sticky than others. Some knowledge sticks with you if you learn it in a particular way if you learn it in a hands on way if you are really immersed in a problem and that's certainly what studying a Ph.D is it's being immersed in problem for two or three years - you need to get your head around and make your contribution to the world's knowledge. So that was rte ally interesting for me.

In terms of the kind of technical knowledge I had experience which has set me up in my position now in terms of writing software - I was writing short programs to automate parts of my rig. I was also looking at how we can get hardware components whether it be electronic valves or sensing circuits to talk to one another and interface those. So I think if I were if I were trying to do that now I'd have to go back to my books and remember how I did it but certainly it is the basic principles of programming; of being comfortable taking computers apart and playing with them and seeing what works and what doesn't work in a kind of experimental, trial and error way kind of stood me in good staid for I'm now teaching the children,

LC:

Yeah, that kind of makes sense to me.

Sorry I'm trying to keep very still with facial expressions because every time I move the bitrate drops

So to go on from there it's almost answered my next question. Now it answers why you went about in such detail but you're a year ahead so how did you lead up to that? What was it. what were you involved in, what kind of process then made you leap a year ahead and did you follow the CAS (Computing at School) forums; did you read the emerging documentation because when people look at your amazing documentation on your site, it's just there it's very, very comprehensive with screenshots, even with the granularity of the whole planning - it's quite amazing…

JC:

Well thank you, thank you. Well I'm very fortunate in that around this time last year in my school I joined the middle leaders team in leading ICT as it was then called and my head teacher spoke to me and said; 'Would you like to come out of class for the following year, which is the year we've just had (2012 - 2013 school year) so that within the school you can really lead on building capacity in looking ahead at the new curriculum." So I've really got to thank my head teacher for recognising that perhaps I had the kind of skills to get ahead of the game and give me the opportunity coming out of class.

So what I then did is … prior to that a lot of the work I'd done in school, given my background around science, so I was a member of a lot of professional organisations for science teaching like the Association of Science Education etc but the world of ICT teaching and learning in computing was actually there for me to discover so the initial document that I started my work on was the draft computing curriculum which I think was released in the autumn term of last year. So what I did is I took that and set about learning about the teaching of computing and the teaching of learning

about computing and I suppose that's where I think that, going back to what I said before about having the experience of doing a Ph.D and knowing how to find out and knowing how to learn I think that stood me in good stead because I just started hitting the internet, speaking to people, finding out what was out there and whilst this change is only happening now to the ICT/ Computing curriculum , there is a lot of material out there about teaching programming whether it is coming form different organisations - you may have mentioned Computing at School or different countries around the world so I spent quite a bit of time learning about how to teach and who children learn about computing. Then I set about breaking down the government document draft sand then extrapolating out out into a series progressive learning objectives and skills and a great kind of help with that actually was that I was down in London and there was an exhibition on Alan Turing at the Science Museum and that was fantastic because it really wanted to communicate with the public quite clearly what this discipline of programming Computer Science is and they had this wonderful displays and hands on experiments of the fundamentals of loops, of conditions, of variables, and that came at the perfect time because I was getting a bit confused myself about what actually were the fundamentals that made up this whole kind of curriculum - so that really helped and that helped me design it. So then I basically mapped out all these skills; kind of made them cyclical and progressive as I said so that we could come back and revisit things and then the really fun part was just spending several weeks scouring the internet for the programs and software that I was going to use; our teachers were going to use to deliver this curriculum. SO up until this point I really hadn't heard of things like Scratch and Kodu and other programs like Game Salad, Codea so I had a fantastic two or three weeks and that was brilliant just learning all these different programmes and seeing how they would work in the curriculum. And then once I had that I knew the skills we wanted to teach, I knew the programs we were going to use to do it and that was when I wrote the how to teach how to programming document that I think you've probably seen on http://www.primarycomputing.co.uk.

And that was then to hand over to teachers and say basically don't be worried, don't be scared this is fantastic, the children are going to love it, the language is a bit new but the principles ar pretty easy to get your head around and tho sis what you need to know and this what we are going to teach the children and tho is what we're going to let them then explore. SO that's the kind of process I went through.

LC:

And can I ask you - you've been using social media you were on social media did you find that of use

JC:

Yes - yeah yeah.

Twitter, for me, and I say this now when I go to other schools and talk to teachers - one of the first I ask is : Are you on Twitter?

I think still people are asking for a social friendship thing but they don't realise that it is the place to be and to go for advice on contemporary teaching and learning theory that the network of people I have on there is who I get a lot of information from.

LC:

Yeah - it seems to me that you've got the prefect storm you've had all the qualities of doing the Ph.D enabled you to do that; you had time out from the class - someone who recognised what you wanted to do; you had joined lots of professional associations; you had reflective practice - I maintain that you need to have a masters or above (although I haven't got one) although you need

to have a masters or above to actually start to build in that reflective practice and then you're able to go out and judge your consideration against other things out there in the world and you were triggered by an interest and by being reflective and it seems to me, and this does seem to be the case, this generation of teachers I have to say, is probably the best there's ever been interns of that. In terms of professional practice, in terms of knowing where they want to go even before the curriculum's … even before the ink is dry on the page … you know you've got a lot of things. The one reservation…I worry about is that you've created this wonderful document and it's just met worry that people may just look at it and use it verbatim and without any reflection and it seems to me …are you going into any schools and talking to people about it or giving CPD?

JC:

Yeah - I'm developing that more at the moment. I find that I'm getting contacted more and more by schools, by ICT leaders who are very apprehensive about the forthcoming changes and require support and I agree with you and acknowledge your concerns that ..taking something… this curriculum was designed for our school, for our technology and our children and when I delivered the curriculum to our staff in our staff meeting there were discussions that came about which changed things which matched it to the needs of our school and to get the most out of the curriculum it would have to be matched to children in schools to technology.

I think, however, given the quite significant change of the old ICT curriculum to computing and the requirements, really, to have, a kind of knowledge of programming I think that teachers will require quite a bit of support, certainly, initially, so I think it's about striking a balance between providing the documentation and the CPD to support teachers but by doing that the aim of that support is to open up and get those teachers confident enough so that they are delivering schemes of work that are not verbatim; that they are building in opportunity for pupils to answer open-ended enquiry based kind of questions around programming and certainly my work this summer, which I'm going to start next week after I've relaxed for a little bit first, is a mark II of this curriculum because what I've seen from this year is that it has been fantastic in getting programming being taught in our schools; being taught in a differentiated way on different platforms.

The next step, I think, is to remodel this curriculum around more of a problem based learning model whereby the units will comprise of two elements; a discrete kind of skills teaching element but then a scenario, a problem which pupils will tackle working in groups and which will be open-ended so that there will be infinite different solutions to that problem rather than a pre-defined solution which teachers are funnelling children towards. So with that curriculum design then there is that room for interpretation - it won't be that schools are just reproducing something verbatim because there won't be that kind of defined solution.

LC:

Yep , it seems to me that almost sort of games based coding or learning could meet that need in some cases because you've got a group situation whereby you may have to produce a finished product but the way you go about it can done in different ways. I've been exploring; I've been looking at the MineCraft mods and they have got computer science in them - I think MineCraft in itself isn't my ideal in terms of an environment even though I've been in Second Life for many years but that kind of… I think you're right there… this is where computer science … people forget about reflection … it's about problem solving … it's about computational thinking for want of a better word (words!) and it's very interesting that you say the first level is doing the ground work almost…and then the second level is plumbing that in to the curriculum in more, I suppose, genuine, authentic manner in a sense and you have the social aspect; you have the aspect of reflection built in - I think that's really fascinating …

JC:

Yeah, yeah I think, as you say, it's about the groundwork and then moving that on because as I understand it one of the criticisms of the old ICT curriculum is that it was too focused on skilling children in a particular set of packages of programs - of Microsoft Office basically - what I think there might be a danger of doing is we might just educate children on how to use Scratch but that doesn't necessarily mean then understand the underlying concepts of programming and that they can apply those concepts in different learning environments and different programming environments - so that's why I think … so that's why we tried first of all with the curriculum to ensure that there are skills which are not program specific but also then why it is important that they are getting the opportunity to programme in a number of different environments as well.

LC:

Yeah it's almost being able to abstract that whole conceptual framework and move beyond which is quite a big ask in the very first year of doing stuff like this. What are your plans beyond that in terms do you have any ambitions beyond this because this is a very comprehensive document and you really have thought reflectively on it. Is it rolling out in your school, what are the outcomes and assessments that you're working on?

JC:

It's been great to see teachers teaching programming in school this year and the children absolutely love it and they are so engaged with technology and so may of them play computer games; it's been really taken on board by the children in a fantastic way. they're really engaged.

It was quite difficult when I came to put the curriculum together to have any idea whether or not what I was asking at the different years was appropriate and in general they have - the children at each level have superseded what I expected.

I think the challenge, here, considering, a broader/ wider perspective is about communicating with KS3 / 4 just exactly where we can get these children to by KS2 because at the moment everyone's kind of starting from the same point of "this is new for everyone" but I think we need dialogue with KS3 so that the curriculum design … there's not a massive overlap and as a result children are becoming kind of bored with what they're doing because, you know, they've had the opportunity to tackle that work in KS2.

So I think looking forward - another year of Curriculum MK II in my school and Curriculum MK II I'm going to share on there blog and it's always great to hear of other schools which are trailing it and giving feedback as well and beyond that I'm not entirely sure. I think one of the great things about being in ICT and Computing is that things change so quickly. When you think about mapping out a curriculum from years 1 - 6 well if we think how much the technology's going to change from when a child enters year 1 to when it leaves in year 6 then - a curriculum is forever be a working document really so I don't think the work will ever be done.

I think it will be exciting for myself to keep up with what's happening in world of digital and technology etc and ensuring that my children get the opportunity in the school and other schools to access what is relevant.

LC:

Yeah it does seem to me that at some point transition projects, because of the very nature of computing, and the connectives in terms of digital literacies, would enable that by practitioners and others children… like for example you have Digital Leadership going into schools now - You're having things like KidsMeet where you can actually genuinely connect up with the other school

communities and start to make some comparatives (comparisons!). I mean the sad thing the other day was I was in a school and I put this out on Twitter an ex-pupil came in and said ":

"Oh yes we did Scratch and then we did a Powerpoint about it".

I was just, sort of , pulling my hair out really. As someone said there's a disconnect and it's again, the more exemplars like this video, (hopefully if it comes out) will give an exemplar to people and raise those discussions and raise the consciousness of people because I think that's a really important debate to have and down the line I don't see any bar especially if people are setting up their own servers to actually make specific educational communities online that will connect with those schools who want to do it and you can have an outstanding practice between those practitioners regardless of what other people are doing and then hopefully people will gradually get sucked into that culture I think - I would hope anyway.

JC:

Yup

LC:

Well Jon can I just say to you thank you so much for taking the time in the holiday and you're going to spend a vast amount of your holiday doing MK II.

Can you just remind us what your web site is called?

JC:

The website is http://www.primarycomputing.co.uk you can also find me on Twitter @Dr_CHips_ . Those details are also on Primary Computing as well. So please check it out and have a follow and great to have any feedback that people might have.

LC:

Yes, and I'm certainly going to be doing a few INSETS and I'll point people towards your materials as I am with Phil Bagge's and other people's because there are a few good primary practitioners, now, who are actually coming out of the woodwork as I put it and people need to know who you are.

Thank you so much.

JC:

No- you're welcome.

The funds to enable the time to do this transcription came from Computing at School (http://www.computingatschool.org.uk/)